

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-700  
Relating to Certification of New Motor Vehicles

FORD MOTOR COMPANY

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

Pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That Ford Motor Company 1997 model-year exhaust emission control systems are certified as described below for light-duty trucks:

Fuel Type: Gasoline

Engine Family: VFM2.318G1EK Displacement: 2.3 Liters (140 Cubic Inches)

Emission Control Systems & Special Features:

Three Way Catalytic Converter  
Heated Oxygen Sensors (two)  
Exhaust Gas Recirculation  
Sequential Multiport Fuel Injection

Vehicle models, transmissions, engine codes and evaporative emission control families are listed on attachments.

The certification exhaust emission standards for this engine family in grams per mile are:

<u>Loaded Vehicle Weight (lbs.)</u>	<u>Miles</u>	<u>Non-Methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Carbon Monoxide (20°F)</u>
0-3750	50,000	0.25	3.4	0.4	10.0
	100,000	0.31	4.2	0.6	n/a

The certification exhaust emission values for this engine family in grams per mile are:

<u>Loaded Vehicle Weight (lbs.)</u>	<u>Miles</u>	<u>Non-Methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Carbon Monoxide (20°F)</u>
0-3750	50,000	0.09	0.6	0.4	2.1
	100,000	0.10	0.7	0.5	n/a

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the aforementioned exhaust emission standards based on its submitted plan to comply with the fleet average non-methane organic gases (NMOG) exhaust mass emission requirements as set forth in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That under the submitted NMOG fleet average compliance plan, if the manufacturer incurs a NMOG debit for the aforementioned model year based on the projected NMOG fleet average exceeding the value required by the above-referenced standards and test procedures, all incurred NMOG debits by the manufacturer shall be equalized as required by the standards and test procedures.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the 50,000-mile evaporative emission standards applicable to 1980 through 1994 model-year vehicles in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles," and the listed vehicle models comply with those standards.

BE IT FURTHER RESOLVED: That, based on the evaporative emission phase-in compliance schedule submitted by the vehicle manufacturer, the listed vehicle models shall not be subject to the running loss and useful life standards set forth in the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles."

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill Pipes and Openings of Motor Vehicle Fuel Tanks" for the aforementioned model year (Title 13, California Code of Regulations, Section 2235).

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high-altitude requirements and highway emission standards, and with the California Inspection and Maintenance emission standards in place at the time of certification, as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "California Motor Vehicle Emission Control Label Specifications" for the aforementioned model year (Title 13, California Code of Regulations, Section 1965).

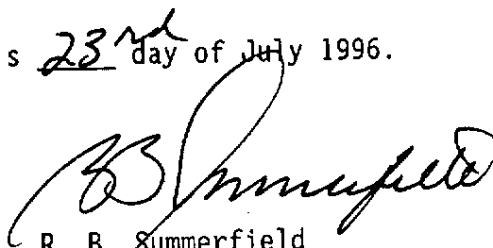
BE IT FURTHER RESOLVED: That the manufacturer is certifying the listed vehicle models with a partially complying on-board diagnostic system for the aforementioned model year pursuant to Title 13, California Code of Regulations, Section 1968.1(m)(6.2) ("Malfunction and Diagnostic System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty vehicles and Engines").

BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

Vehicles certified under this Executive Order must conform to all applicable California emission regulations,

The Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California this 23<sup>rd</sup> day of July 1996.

A handwritten signature in dark ink, appearing to read "R. B. Summerfield", is written over the typed name and title.

R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division





E.O.# A-10-7001997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Page \_\_\_ of \_\_\_

Manufacturer FORD MOTOR COMPANY Eng. Family VFM2.318G1EK  
 Evap Std: 50K X Useful Life with R/L \_\_\_ Evap Engine Family: VFM1045AYPBA  
 Exh Std: Tier-0 \_\_\_ Tier-1 X TLEV \_\_\_ LEV \_\_\_ ULEV \_\_\_ ZEV \_\_\_; EPA Tier-0 \_\_\_ Tier-1 \_\_\_  
 Veh Class(es): PC \_\_\_ LDT1 X LDT2 \_\_\_ MDV1 \_\_\_ MDV2 \_\_\_ MDV3 \_\_\_ MDV4 \_\_\_ MDV5 \_\_\_  
 Single Cert Std for Multi-Class Eng Fam: \_\_\_ (specify: N/A, LDT1, MDV1, ETC.)  
 Exh Cert Fuel(s): Indo X Ph2 \_\_\_ Diesel: 13 CCR 2282 \_\_\_ or 40 CFR 86.113-90 \_\_\_ or -94 \_\_\_  
 M85 \_\_\_ CNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_  
 Fuel Type(s): Dedicated \_\_\_ Flex-Fuel \_\_\_ Dual-Fuel \_\_\_ Gasoline X Diesel \_\_\_ M85 \_\_\_  
 CNG \_\_\_ LNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_  
 Hybrid: Type A \_\_\_ B \_\_\_ C \_\_\_, APU Cycle (e.g., Otto, Diesel, Turbine) \_\_\_  
 Engine Configuration: I-4 Displacement: 2.3 / \_\_\_ Liter \_\_\_ / \_\_\_ Cubic Inches  
 Engine: Front X Mid. \_\_\_ Rear \_\_\_ Drive: FWD \_\_\_ RWD X 4WD-FT \_\_\_ 4WD-PT \_\_\_  
 Exhaust ECS & Special Features (EG., EGR, MFI, TC, CAC): EGR, TWC, SFI, HO2S(2)  
 (Use abbreviations per SAE J1930 Sep 91)

Engine Code/ CALIF	Veh. Models (all models are 4x2 *)	Trans. Type: A-Auto M-Man.	Equiv. Test Weight	DPA #	Ign. Sys. (ECM/PCM) Part No. -12A650-	EGR Syst. Part No. -9D475-	Catalyst Part No. -5E211-
2.3L							
749TR05 N	MAZDA RC LWB	M	3375	12.3	F77C-MB	F57E--BA	F77A--ABA
N	MAZDA RC SWB	"	3375	12.3	"	"	"
A	MAZDA RC LWB	"	3500	12.3	"	"	"
A	MAZDA RC SWB	"	3375@	12.3	"	"	"
N	MAZDA SC SWB	"	3625	12.3	"	"	"
A	MAZDA SC SWB	"	3625@	12.3	"	"	"
N	RANGER RC LWB	"	3375	12.3	"	"	"
N	RANGER RC SWB	"	3375	12.3	"	"	"
A	RANGER RC LWB	"	3375	12.3	"	"	"
A	RANGER RC SWB	"	3375	12.3	"	"	"
N	RANGER SC SWB	"	3625	12.3	"	"	"
A	RANGER SC SWB	"	3625	12.3	"	"	"

# Same DPA for all tires (P195/70R14, P215/70R14, P225/70R14)

\* RC = REGULAR CAB, SC = SUPER CAB, SWB = Short Wheel Base, LWB = Long Wheel Base

@ Test at next higher ETW

## Certification Standards

50K/100K

NMHC: 0.25/0.31

CO: 3.4/4.2

NOx: 0.4/0.6

EVAP: 2.0

COLD CO: 10.0

ENGINE FAMILY: VFM2.318G1EK  
ISSUED: 7-27-96  
REVISED:

20.09.17.02 - 3

R/C 2.3-101

170

E.O.# A-10-7001997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Page \_\_\_ of \_\_\_

Manufacturer FORD MOTOR COMPANY Eng. Family VFM2.318G1EK  
 Evap Std: 50K X Useful Life with R/L \_\_\_ Evap Engine Family: VFM1045AYPBA  
 Exh Std: Tier-0 \_\_\_ Tier-1 X TLEV \_\_\_ LEV \_\_\_ ULEV \_\_\_ ZEV \_\_\_; EPA Tier-0 \_\_\_ Tier-1 \_\_\_  
 Veh Class(es): PC \_\_\_ LDT1 X LDT2 \_\_\_ MDV1 \_\_\_ MDV2 \_\_\_ MDV3 \_\_\_ MDV4 \_\_\_ MDV5 \_\_\_  
 Single Cert Std for Multi-Class Eng Fam: \_\_\_ (specify: N/A, LDT1, MDV1, ETC.)  
 Exh Cert Fuel(s): Indo X Ph2 \_\_\_ Diesel: 13 CCR 2282 \_\_\_ or 40 CFR 86.113-90 \_\_\_ or -94 \_\_\_  
 M85 \_\_\_ CNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_  
 Fuel Type(s): Dedicated \_\_\_ Flex-Fuel \_\_\_ Dual-Fuel \_\_\_ Gasoline X Diesel \_\_\_ M85 \_\_\_  
 CNG \_\_\_ LNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_  
 Hybrid: Type A \_\_\_ B \_\_\_ C \_\_\_ APU Cycle (e.g., Otto, Diesel, Turbine) \_\_\_  
 Engine Configuration: I-4 Displacement: 2.3 / \_\_\_ Liter \_\_\_ / \_\_\_ Cubic Inches  
 Engine: Front X Mid. \_\_\_ Rear \_\_\_ Drive: FWD \_\_\_ RWD X 4WD-FT \_\_\_ 4WD-PT \_\_\_  
 Exhaust ECS & Special Features (EG., EGR, MFI, TC, CAC): EGR, TWC, SFI, HO2S(2)  
 (Use abbreviations per SAE J1930 Sep 91)

Engine Code/ CALIF	Veh. Models (all models are 4x2 *)	Trans. Type: A-Auto M-Man.	Equiv. Test Weight	DPA #	Ign. Sys. (ECM/PCM) Part No. -12A650-	EGR Syst. Part No. -9D475-	Catalyst Part No. -5E212-
2.3L							
750TR05 N	MAZDA RC LWB	A	3375@	12.3	F77C-KB	F57E--BA	F77A--ABA
N	MAZDA RC SWB	"	3375	12.3	"	"	"
A	MAZDA RC LWB	"	3500	12.3	"	"	"
A	MAZDA RC SWB	"	3500	12.3	"	"	"
N	RANGER RC LWB	"	3375	12.3	"	"	"
N	RANGER RC SWB	"	3375	12.3	"	"	"
A	RANGER RC LWB	"	3500	12.3	"	"	"
A	RANGER RC SWB	"	3375@	12.3	"	"	"

# Same DPA for all tires (P195/70R14, P215/70R14, P225/70R14)

\* RC = REGULAR CAB, SC = SUPER CAB, SWB = Short Wheel Base, LWB = Long Wheel Base

@ Test at next higher ETW

## Certification Standards

50K/100K

NMHC: 0.25/0.31

CO: 3.4/4.2

NOx: 0.4/0.6

EVAP: 2.0

COLD CO: 10.0

E.O.# A-10-7001997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Page \_\_\_ of \_\_\_

Manufacturer FORD MOTOR COMPANY Eng. Family VFM2.318G1EK  
 Evap Std: 50K X Useful Life with R/L \_\_\_ Evap Engine Family: VFM1045AYPBA  
 Exh Std: Tier-0 \_\_\_ Tier-1 X TLEV \_\_\_ LEV \_\_\_ ULEV \_\_\_ ZEV \_\_\_; EPA Tier-0 \_\_\_ Tier-1 \_\_\_  
 Veh Class(es): PC \_\_\_ LDT1 X LDT2 \_\_\_ MDV1 \_\_\_ MDV2 \_\_\_ MDV3 \_\_\_ MDV4 \_\_\_ MDV5 \_\_\_  
 Single Cert Std for Multi-Class Eng Fam: \_\_\_ (specify: N/A, LDT1, MDV1, ETC.)  
 Exh Cert Fuel(s): Indo X Ph2 \_\_\_ Diesel: 13 CCR 2282 \_\_\_ or 40 CFR 86.113-90 \_\_\_ or -94 \_\_\_  
 M85 \_\_\_ CNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_  
 Fuel Type(s): Dedicated \_\_\_ Flex-Fuel \_\_\_ Dual-Fuel \_\_\_ Gasoline X Diesel \_\_\_ M85 \_\_\_  
 CNG \_\_\_ LNG \_\_\_ LPG \_\_\_ Other (specify) \_\_\_  
 Hybrid: Type A \_\_\_ B \_\_\_ C \_\_\_ APU Cycle (e.g., Otto, Diesel, Turbine) \_\_\_  
 Engine Configuration: I-4 Displacement: 2.3 / \_\_\_ Liter \_\_\_ / \_\_\_ Cubic Inches  
 Engine: Front X Mid. \_\_\_ Rear \_\_\_ Drive: FWD \_\_\_ RWD X 4WD-FT \_\_\_ 4WD-PT \_\_\_  
 Exhaust ECS & Special Features (EG., EGR, MFI, TC, CAC): EGR, TWC, SFI, HO2S(2)  
 (Use abbreviations per SAE J1930 Sep 91)

Engine Code/ CALIF	Veh. Models (all models are 4x2 *)	Trans. Type: A-Auto M-Man.	Equiv. Test Weight	DPA #	Ign. Sys. (ECM/PCM) Part No. -12A650-	EGR Syst. Part No. -9D475-	Catalyst Part No. -5E211-
2.3L							
749TR06 N	MAZDA RC LWB	M	3375	12.3	F77C-MC	F57E--BA	F77A--ABA
N	MAZDA RC SWB	"	3375	12.3	"	"	"
A	MAZDA RC LWB	"	3500	12.3	"	"	"
A	MAZDA RC SWB	"	3375@	12.3	"	"	"
N	MAZDA SC SWB	"	3625	12.3	"	"	"
A	MAZDA SC SWB	"	3625@	12.3	"	"	"
N	RANGER RC LWB	"	3375	12.3	"	"	"
N	RANGER RC SWB	"	3375	12.3	"	"	"
A	RANGER RC LWB	"	3375	12.3	"	"	"
A	RANGER RC SWB	"	3375	12.3	"	"	"
N	RANGER SC SWB	"	3625	12.3	"	"	"
A	RANGER SC SWB	"	3625	12.3	"	"	"

# Same DPA for all tires (P195/70R14, P215/70R14, P225/70R14)

\* RC = REGULAR CAB, SC = SUPER CAB, SWB = Short Wheel Base, LWB = Long Wheel Base

@ Test at next higher ETW

## Certification Standards

50K/100K

NMHC: 0.25/0.31

CO: 3.4/4.2

NOx: 0.4/0.6

EVAP: 2.0

COLD CO: 10.0

ENGINE FAMILY: VFM2.318G1EK  
ISSUED: 7-27-96  
REVISED:

20.09.17.02 - 5

R/C 2.3-103

12



1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Page of \_\_\_\_\_

Manufacturer FORD MOTOR COMPANY Eng. Family VEM2.318G1EK  
Evap Std: 50K X Useful Life with R/L \_\_\_\_\_ Evap Engine Family: VFM1045AYPBA  
Exh Std: Tier-0 \_\_\_\_\_ Tier-1 X TLEV \_\_\_\_\_ LEV \_\_\_\_\_ ULEV \_\_\_\_\_ ZEV \_\_\_\_\_; EPA Tier-0 \_\_\_\_\_ Tier-1 \_\_\_\_\_  
Veh Class(es): PC \_\_\_\_\_ LDT1 X LDT2 \_\_\_\_\_ MDV1 \_\_\_\_\_ MDV2 \_\_\_\_\_ MDV3 \_\_\_\_\_ MDV4 \_\_\_\_\_ MDV5 \_\_\_\_\_  
Single Cert Std for Multi-Class Eng Fam: \_\_\_\_\_ (specify: N/A, LDT1, MDV1, ETC.)  
Exh Cert Fuel(s): Indo X Ph2 \_\_\_\_\_ Diesel: 13 CCR 2282 \_\_\_\_\_ or 40 CFR 86.113-90 \_\_\_\_\_ or -94 \_\_\_\_\_  
M85 \_\_\_\_\_ CNG \_\_\_\_\_ LPG \_\_\_\_\_ Other (specify) \_\_\_\_\_  
Fuel Type(s): Dedicated \_\_\_\_\_ Flex-Fuel \_\_\_\_\_ Dual-Fuel \_\_\_\_\_ Gasoline X Diesel \_\_\_\_\_ M85 \_\_\_\_\_  
CNG \_\_\_\_\_ LNG \_\_\_\_\_ LPG \_\_\_\_\_ Other (specify) \_\_\_\_\_  
Hybrid: Type A \_\_\_\_\_ B \_\_\_\_\_ C \_\_\_\_\_, APU Cycle (e.g., Otto, Diesel, Turbine) \_\_\_\_\_  
Engine Configuration: I-4 Displacement: 2.3 / \_\_\_\_\_ Liter \_\_\_\_\_ / \_\_\_\_\_ Cubic Inches  
Engine: Front X Mid. \_\_\_\_\_ Rear \_\_\_\_\_ Drive: FWD \_\_\_\_\_ RWD X 4WD-FT \_\_\_\_\_ 4WD-PT \_\_\_\_\_  
Exhaust ECS & Special Features (EG., EGR, MFI, TC, CAC): EGR, TWC, SFL, HO2S(2)  
(Use abbreviations per SAE J1930 Sep 91)

Engine Code/ CALIF	Veh. Models (all models are 4x2 *)	Trans. Type: A-Auto M-Man.	Equip. Test Weight	DPA #	Ign. Sys. (ECM/PCM) Part No. -12A650-	EGR Syst. Part No -9D475-	Catalyst Part No. -5E212-
2.3L							
750TRO6	N MAZDA RC LWB	A	3375@	12.3	F77C-KC	F57E--BA	F77A--ABA
	N MAZDA RC SWB	"	3375	12.3	"	"	"
	A MAZDA RC LWB	"	3500	12.3	"	"	"
	A MAZDA RC SWB	"	3500	12.3	"	"	"
	N RANGER RC LWB	"	3375	12.3	"	"	"
	N RANGER RC SWB	"	3375	12.3	"	"	"
	A RANGER RC LWB	"	3500	12.3	"	"	"
	A RANGER RC SWB	"	3375@	12.3	"	"	"

# Same DPA for all tires (P195/70R14, P215/70R14, P225/70R14)

```
# Same DPA for all tires (P195/70R14, P215/70R14, P225/70R14,
* RC = REGULAR CAB, SC = SUPER CAB, SWB = Short Wheel Base, LWB = Long Wheel Base
```

@ Test at next higher ETW

Certification Standards

	<u>50K/100K</u>
NMHC:	0.25/0.31
CO:	3.4/4.2
NOx:	0.4/0.6
EVAP:	2.0 —
COLD CO:	10.0